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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/676,895 | 09/30/2003 | Jeffery Bogart | NVLUS.036CP1 | 8064 |

20995 7590 03/05/2008
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| EXAMINER |
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VINH, LAN

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| ART UNIT | PAPER NUMBER |
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1792

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

03/05/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/676,895 | Applicant(s) BOGART ET AL. | |
| | Examiner Lan Vinh | Art Unit 1792 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>010408, 030304</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 9-14 in the reply filed on 1/4/2008 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 9, 11, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Katakabe (US 6,558,478)

It is noted that claims 9 drawn to an apparatus and the claim language of "edge copper removal" and " for removing conductive material from an edge region of a workpiece subsequent to an electrochemical process as the workpiece rotated" are preamble/statement of material worked upon and intended use and are therefore not given patentable weight because:

MPEP 2114 [R-1] Apparatus and Article Claims — Functional Language

For a discussion of case law which provides guidance in interpreting the functional portion of means-plus-function limitations see MPEP § 2181 - § 2186.

APPARATUS CLAIMS MUST BE STRUCTUR-ALLY DISTINGUISHABLE
FROM THE PRIOR ART

While features of an apparatus may be recited either structurally or functionally, claims directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

2115 [R-2] Material or Article Worked Upon by Apparatus
MATERIAL OR ARTICLE WORKED UPON DOES NOT LIMIT
APPARATUS CLAIMS

“Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, “[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.” In re Young, 75 F.2d *>996<, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)

Katakabe discloses an apparatus for cleaning/removing copper on a edge of a substrate/workpiece W as the workpiece rotated, wherein the edge region of the substrate comprises a front edge surface, a back edge surface, and a bevel (col 8, lines 60-62; fig. 2), the_apparatus comprising:

one nozzle 28 for directing chemical solution c/a first etchant flow onto the back edge surface of the workpiece

other nozzle 26 for directing chemical solution b/a second etchant flow onto the front surface edge of the workpiece. (col 6, lines 20-30; fig. 2)

Regarding claim 11, fig. 2 of Katakabe shows that the nozzle 28 and nozzle 26 receive etchant from different etchant supply

The limitation of claim 12 has been discussed above

3. Claims 9, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Mertens et al (US 6, 398,975)

Mertens discloses an apparatus for cleaning a substrate/workpiece 1 as the workpiece rotated, wherein the edge region of the substrate comprises a front edge surface, a back edge surface, and a bevel (fig. 1b), the apparatus comprising:

one nozzle 8 for directing a first etchant flow onto the back edge surface of the workpiece

other nozzle 2 for directing a second etchant flow onto the front surface edge of the workpiece. (col 7, lines 20-62; fig. 1b)

Regarding claim 11, fig. 1b of Mertens shows that the nozzle 8 and nozzle 2 receive etchant from different etchant supply

4. Claims 9-10, 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Miki et al (US 6, 325,081)

Miki discloses an apparatus for cleaning a wafer 601 as the workpiece rotated, wherein the edge region of the substrate comprises a front edge surface, a back edge

surface, and a bevel (fig. 6a), the apparatus comprising:

one nozzle 603 for directing a first solution/first etchant flow onto the back edge surface of the workpiece

other nozzle 602 for directing a second solution/a second etchant flow onto the front surface edge of the workpiece. (col 14, lines 5-15; fig. 6a)

Regarding claim 10, fig. 11 of Miki shows that the front nozzle and rear nozzle receive etchant from the same etchant supply

Regarding claim 13-14, Miki discloses that the flow rate of the first solution/etchant provided by the front nozzle is different than a flow rate of the second solution/etchant provided by the rear nozzle/ the flow rate of the first etchant provided by the front nozzle is the same as a flow rate of the second etchant provided by the rear nozzle (Table 5)

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471.

The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lan Vinh/
Primary Examiner, Art Unit 1792